

# IMPORTATION OF PITAYA FRUIT, *HYLOCEREUS* SPP. FROM NICARAGUA INTO THE UNITED STATES

MAY 1997

## Agency Contact:

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## A. Previous Risk Assessments, Current Status and Pest Interceptions

### 1a. Decision history for species of pitaya from Central and South America.

1988 - Colombia: Fruits of *Hylocereus* spp. denied entry, no treatment available for *Ceratit*  
*capitata*.

1992 - Belize: Fruits of *Acanthocereus*, *Cereus*, and *Selenicereus* denied entry, no treatme  
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Fruits of *Lemaireocereus* spp. denied entry, no treatment available for  
*Anastrepha* sp.

1996 - Nicaragua: Fruits of *Acanthocereus* spp. denied entry, no treatment available for  
*Ceratit* *capitata*.

### 1b. Interceptions from *Hylocereus* sp. for FY 1985-1996.

<u>Origin</u>	<u>Pest</u>	<u>Host</u>	<u>Total</u>
Colombia	<i>Anastrepha</i> sp.	<i>Hylocereus</i> sp.	1
Mexico	<i>Anastrepha</i> sp.	<i>Hylocereus</i> sp.	1

## B. Pest List: Pest Associated with pitayas.

A preliminary review was conducted to determine if quarantine pests were reported with the commodity and if Plant Protection and Quarantine had an approved treatment for the pest/host combination.

### Quarantine pests reported with pitaya.

*Anastrepha ludens* - In laboratory tests on *Hylocereus* and *Lemaireocereus*, Stone found that the larvae thrive in the fruit (Baker *et al.*, 1944). *A. ludens* is present in Nicaragua (EPPO, 1994).

*Ceratit* *capitata* - In laboratory tests on *Acanthocereus pentagonus*, *Echinocereus triglochidiatus*,

*Hylocereus undatus*, *Pereskia aculeata*, and *Selenicereus pteranthus* larvae were found in the fruits (Keck and Marshall, 1930). **(add specifics when paper is received.)** Medfly is present in Nicaragua (Daxl, 1978).

### **Recommendation:**

Literature documents successful laboratory infestations in *Hylocereus* in caged tests for *Anastrepha ludens* and *Ceratitis capitata*. In addition PPQ has two *Anastrepha* interceptions from this host from Colombia and Mexico. PPQ lacks an approved treatment for these pest/host associations and previous requests for pitaya imports have been denied entry for these pests.

A complete pest risk evaluation will not be initiated to identify all pests of concern unless the importer provides comprehensive pest data to clarify host status or is willing to develop a treatment or other mitigative measures.

### **References:**

- Baker, A. G., Stone, W. E. and Plummer C. C. 1944. A review of studies on the Mexican fruitfly and related Mexican species. USDA, Misc. Publication #531, p. 16-17.
- Daxl, R. 1978. Mediterranean fruit fly ecology in Nicaragua, and a proposal for integrated control. FAO Plant Protection Bulletin 26:150-157.
- EPPO. 1994. European and Mediterranean Plant Protection Organization (EPPO) Plant Quarantine Retrieval (PQR) System, version 3.0 (Computerized plant pest data base based on: Smith, I.M. 1992. Quarantine Pests for Europe. Oxon, UK: CAB International, Paris: Published in association with the European and Mediterranean Plant Protection Organization).
- Keck, C. B. and Marshall, G. E. 1930. Report on host determinations of the Mediterranean fruit fly from April 1929 to February 28, 1930. USDA Orlando Progress Reports 71, Florida.